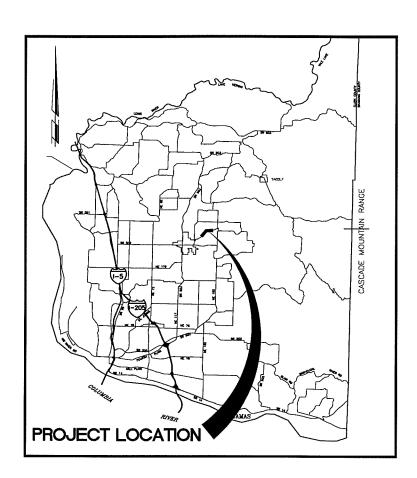
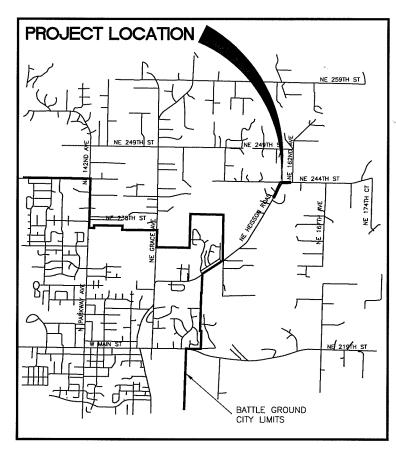
NE HEISSON ROAD

AND NE 244TH STREET INTERSECTION

PLANS FOR THE CONSTRUCTION OF ROADWAY AND STORM DRAINAGE





INDEX OF SHEET 2 SQ1 SUMMARY OF QUANTITIES AND LEGEND 3 TS1 TYPICAL SECTIONS 4 TS2 TYPICAL SECTIONS 5 HV1 HORIZONTAL & VERTICAL CONTROL 6 EC1 EROSION CONTROL PLAN 7 EC2 EROSION CONTROL DETAILS 8 EC3 EROSION CONTROL DETAILS 9 DO1 ROADWAY DETAILS 10 D02 ROADWAY DETAILS 11 DD1 DRAINAGE DETAILS 12 DD2 DRAINAGE DETAILS 13 PP1 PLAN & PROFILE (STA 13+00 TO 17+00) 14 PP2 PLAN & PROFILE (STA 13+00 TO 17+00) 15 PP3 PLAN & PROFILE (STA 17+00 TO E.O.P.) 16 PP4 PLAN & PROFILE (E 244TH STREET) 17 PP5 PLAN & PROFILE (HEISSON/NE 244TH STREET TURN-OFF) 16 IO1 INTERSECTION PLAN

COMMISSIONERS:

BETTY SUE MORRIS, Chair JUDIE STANTON, Commissioner CRAIG A. PRIDEMORE, Commissioner



DEPARTMENT OF PUBLIC WORKS





PRELIMINARY 90% REVIEW SET

ENG #XXXX-XXXXX

Quality Assurance	Project Manager	PW Director/ County Engineer		
Michael Emrick, P.E.	Don Andrews, P.L.S.	Peter Capell, P.E.		

(proud past, promising luture	J
Re	commended for Approv	al
Grading	Erosion	
Storm Water F	lan	
Development Review	Monager	Dote

DESIGN AND ENGINEERING DIVISION- DESIGN SECTION

SUMMARY OF QUANTITIES

ITEM NO.	QUANTITY	UNIT	BID ITEM
1		L.S.	MOBILIZATION
2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CALC.	MINOR CHANGE
3		HOUR	TRAFFIC CONTROL LABOR
4		HOUR	TRAFFIC CONTROL SUPERVISOR
5		L.S.	TEMPORARY TRAFFIC CONTROL DEVICES
6		S.F.	CONSTRUCTION SIGNS CLASS "A"
7		L.S.	CLEARING AND GRUBBING
8		EST.	ROADSIDE CLEANUP
9		L.S.	REMOVAL OF STRUCTURES AND OBSTRUCTION
10		S.Y.	REMOVAL OF EXISTING ASPHALT CONC. PAVEMENT
11		C.Y.	ROADWAY EXCAVATION (INCL. HAUL)
12		C.Y.	STORMWATER FACILITY EXCAVATION (INCL. HAUL)
13		C.Y.	EMBANKMENT COMPACTION
14		C.Y.	GRAVEL BORROW (INCL. HAUL)
15		TON	GRAVEL BORROW (INCL. HAUL)
16		MGAL	WATER
17		C.Y.	DITCH EXCAVATION (INCL. HAUL)
18		S.Y.	CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION
19	()	TON	CRUSHED SURFACING BASE COURSE
20		TON	ASPHALT CONCRETE PAVEMENT CL. A
21		TON	ASPHALT CONCRETE PAVEMENT CL. E
22		L.F.	SAWCUT EXISTING (ASPHALT) PAVEMENT
23			ASPHALT CONCRETE APPROACH CL. A
24		S.F.	MODULAR / SEGMENTAL BLOCK/GRAVITY RETAINING WALL (INCL. CAP UNIT)
25		L.F.	CULVERT PIPE 18 IN. DIAM
26		L.F.	CULVERT PIPE 30 IN. DIAM
27		EACH	CONCRETE DITCH INLET
28		L.F.	TRENCH SAFETY SYSTEM
29			ESC LEAD
30		EACH	STABILIZED CONSTRUCTION ENTRANCE
31		EACH	TIRE WASH
32			TEMPORARY SEDIMENT TRAP
33			INLET PROTECTION
34		L.F.	SILT FENCE
35			EROSION CONTROL & SPILL PREVENTION REINSPECTION FEE
36			SPCC PLAN
37			LANDSCAPE RESTORATION
38	***************************************		ENVIRONMENTAL RESTORATION
39			COMPOST AMENDED TOPSOIL
40			SEEDING AND MULCHING
41			STORMWATER FACILITY SEEDING AND MULCHING
42	***************************************		CEMENT CONCRETE ISLAND CURB
43			FLOW SPREADER/ SWALE DIVIDER CURB
44			COATED CHAIN LINK FENCE TYPE
45			DOUBLE FT. COATED CHAIN LINK GATE
46			REMOVE AND RESET FENCE (INCL. GATE)
47			WIRE FENCE RELOCATION (INCL. GATE)
48		EACH	MAILBOX SUPPORT, TYPE 1

LEGEND

··········	ROW LINE
	NEW EDGE OF PAVEMENT
	NEW CURB FACE LINE
	NEW CURB BACK LINE
	NEW SIDEWALK
	NEW CENTER LINE
- x- x- x- x- x- x- x- x- x-	
	NEW STORM DRAIN OR CULVERT
	NEW FILL LIMITS
-c-c-c-c-c-c-c-c-c-c-c	NEW CUT LIMITS
	SAWCUT LINE
	PERMANENT SLOPE EASEMENT
— SF— SF— SF— SF— SF— SF— SF— SF—	NEW SILT FENCE
	EXISTING EDGE OF PAVEMENT
	EXISTING CURB LINE
	EXISTING CENTER LINE
	EXISTING FENCE LINE FXISTING TELEPHONE LINE
	EXISTING TELEPHONE LINE
—— E —— E —— E ——	EXISTING UNDERGROUND ELECTR
s — s — s — s —	EXISTING SANITARY SEWER LINE
— STM — STM — STM — STM —	EXISTING STORM DRAINAGE
G G G	EXISTING GAS LINE
	EXISTING CULVERT
WARRINGS	EXISTING DITCH CENTER LINE
	EXISTING GUARDRAIL

SYMBOLS

	NEW CATCH BASIN (CB)		EXISTING CURB INLET (CI) EXISTING CATCH BASIN (CB)
•	NEW MANHOLE (MH)	©	EXISTING CATCH BASIN (CB)
©	NEW CURB INLET (CI)	ŏ	EXISTING MISC MH
	NEW COMBINATION CURB INLET (CCI)	*	EXISTING SHRUB
B ₁₀	NEW MAIL BOX	其	EXISTING CONIFEROUS TREE
(1)	NEW HANDICAP RAMP	않	EXISTING DECIDUOUS TREE
(000)	OUTLIE TADE	-	EXISTING SIGN
	CURVE TABLE	\odot	EXISTING DECIDUOUS TREE
⊛	EXISTING TRANSFORMER	U	EXISTING J BOX
\boxtimes	EXISTING ELEC TOWER	(T)	EXISTING TELEPHONE MANHOLE
O _{SAN}	EXISTING SANITARY SEWER MH	-	EXISTING TELEPHONE POLE
Q	EXISTING FIRE HYDRANT	₩	EXISTING LIGHT
O _{CL}	EXISTING CLEAN OUT	с	EXISTING GUY ANCHOR
-₩-	EXISTING GAS VALVE	~	EXISTING POWER POLE
Θ	EXISTING WATER METER		
-₩-	EXISTING WATER VALVE	DT _{MB}	EXISTING MAIL BOX
¤	EXISTING SIGNAL POLE		EXISTING TELEPHONE PEDESTAL
	EXISTING TELEPHONE VAULT	\odot	EXISTING SPRINKLER HEAD
ŧv	EXISTING TELEVISION BOX	\triangle	TRAVERSE POINT
_		⊗	TEST HOLE
•	EXISTING WELL	_	
uu	EXISTING BRUSH LINE		

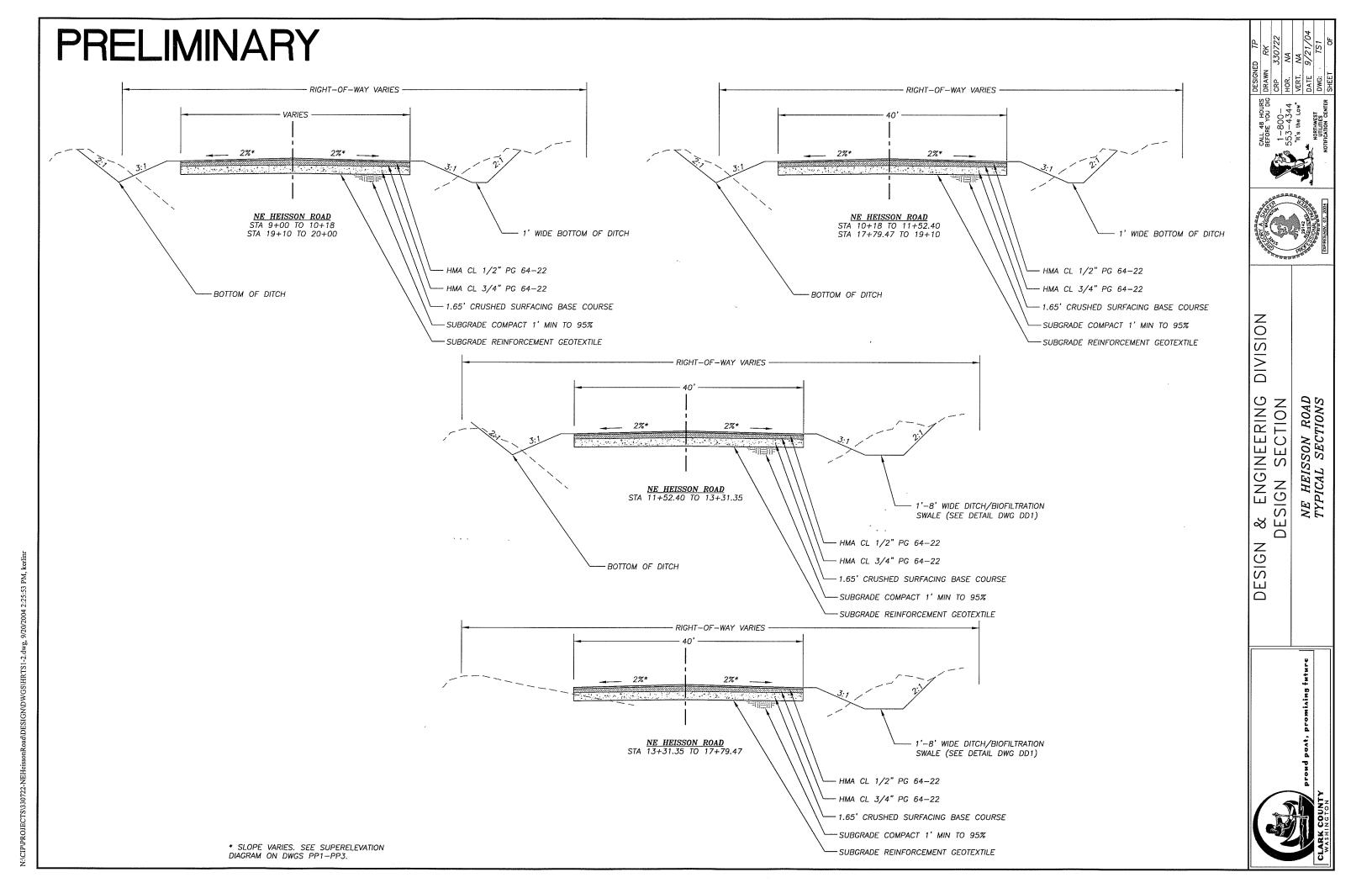
GGGGGG EXISTING HEDGE

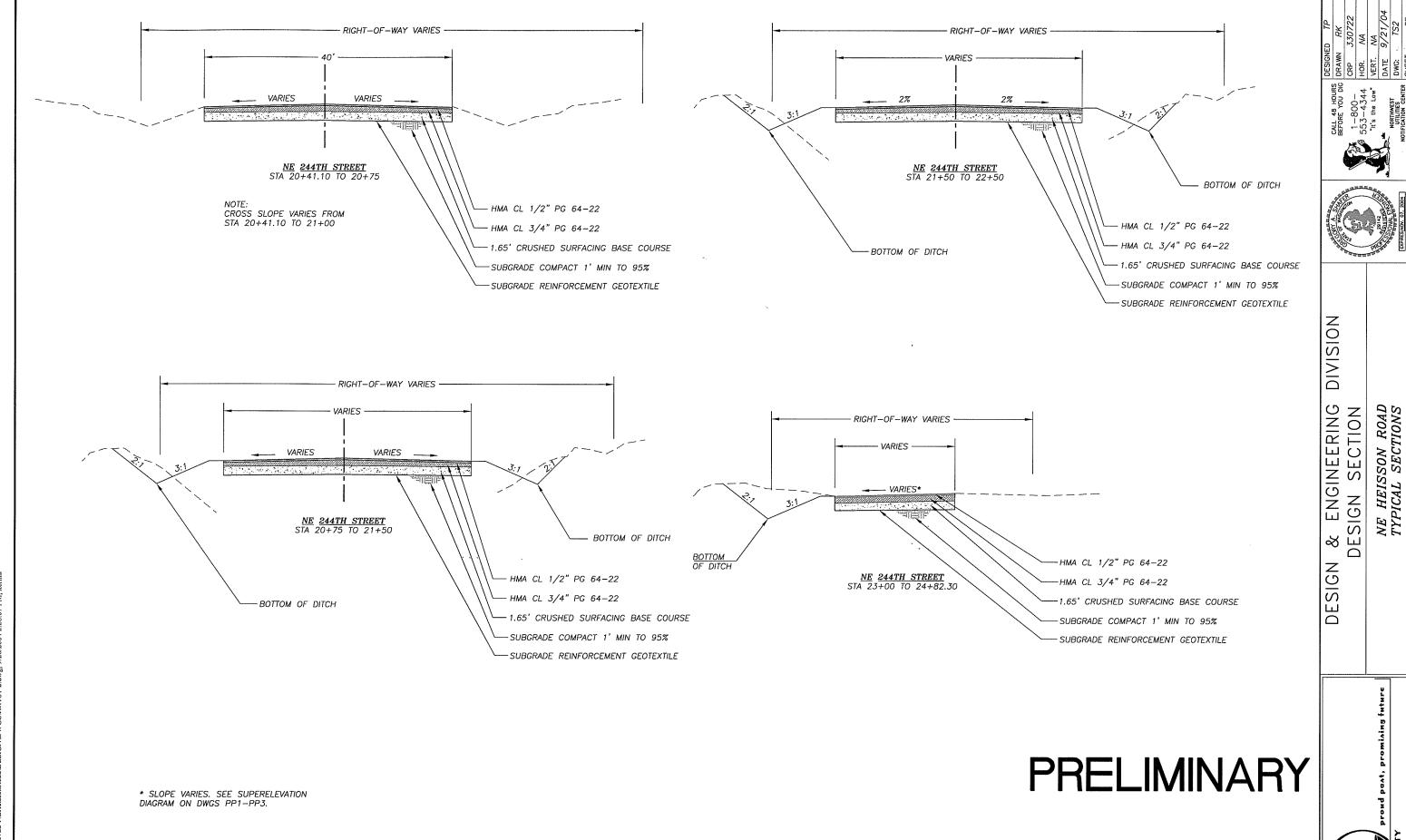


DIVISION

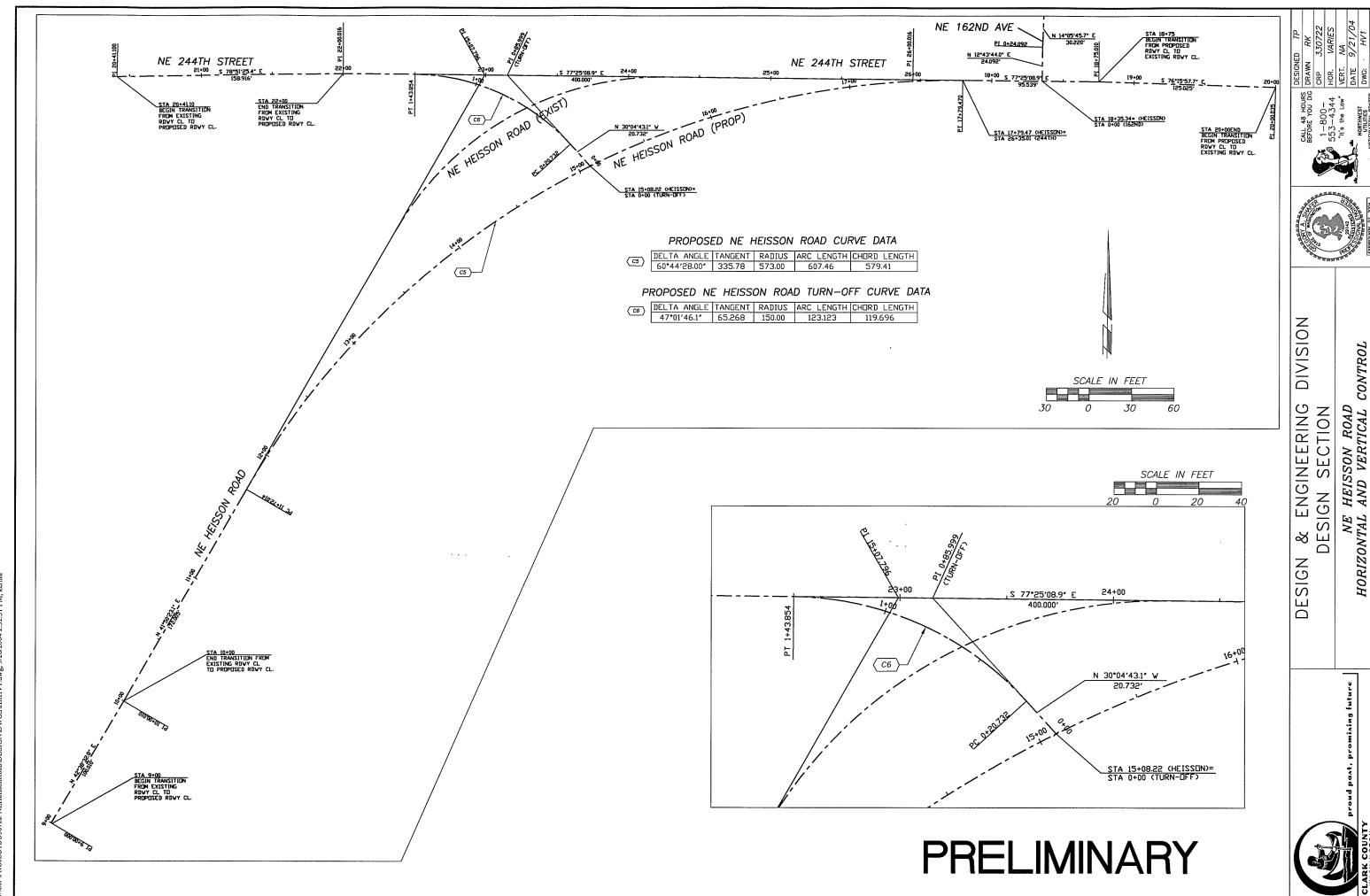
ENGINEERING SIGN SECTION

& ENG DESIGN DESIGN



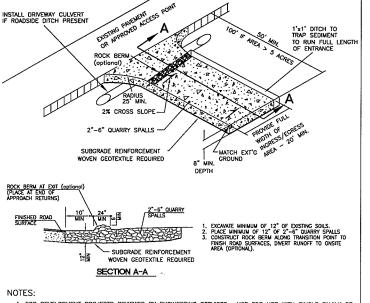


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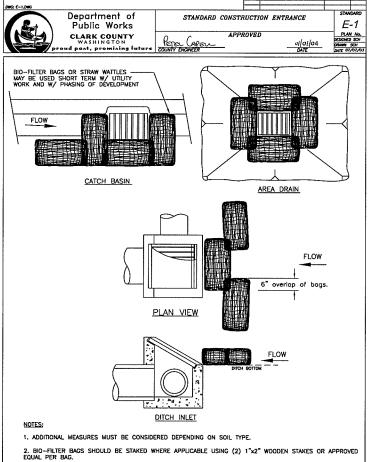


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- FOR DEVELOPMENT PROJECTS REVIEWED BY ENGINEERING SERVICES. NOT FOR USE WITH SINGLE FAMILY OR DUPLEX RESIDENTIAL BUILDING PERMITS. SEE BUILDING DEPT. FOR GRAVEL CONSTRUCTION ENTRANCE PLAN.
- 2. INSTALL WOVEN GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING
- 3. VEHICLE WASHDOWN AREA, IF REQUIRED, IS TO BE INSTALLED AND USED TO REMOVE SEDIMENT FROM VEHICLES THAT ARE ABOUT TO ENTER AN ESTABLISHED ROAD.
- GEOTEXTILE FABRIC. WASHDOWN AREA TO BE FULL WIDTH OF ENTRANCE AND 50' (MIN.), AND 100' IF EXPOSED SOIL IS OVER 5 ACRES.



INLET PROTECTION TYPE A

APPROVED

E-3c

SEE INLET PROTECTION NOTES STD. PLAN E-3 Department of

Public Works

CLARK COUNTY

PRELIMINARY

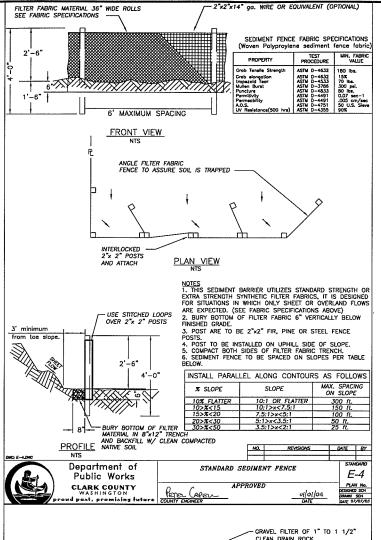


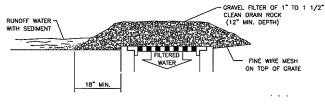
ENGINEERING

ESIGN

ROAD L DETAILS SECTION HEISSON R V CONTROL SIGN NE E EROSION & DES

THE RESPONSIBLE EROSION CONTROL INDIVIDUAL IS TO ENSURE THAT ALL VEHICLES USE THIS ENTRANCE AND ARE TO BE INSPECTED AND CLEANED OF SOILS BEFORE LEAVING PROJECT, AND THAT THE ENTRANCE IS TO BE KEPT CLEAN AT ALL TIMES.





GRAVEL & WIRE MESH NOT TO BE USED IN TRAVELED WAY IF IT MAY RESULT IN A TRAFFIC HAZARD

1. INLET PROTECTION IS INTENDED TO PREVENT COARSE SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS BY FILTERING RUNOFF AND RETAINING SEDIMENT BEFORE IT REACHES A DRAINAGE OR STORM SEWER SYSTEM.

2. PLACE INLET PROTECTION IN AREAS WHERE WATER CAN POND, AND WHERE PONDING WILL NOT HAVE ADVERSE IMPACTS.

INSPECT ONCE PER WEEK ON ACTIVE SITES, ONCE EVERY TWO WEEKS ON INACTIVE SITES, AND WITHIN 24 HOURS FOLLOWING A 0.5 INCH RAIN EVENT.

6. CLEAN INLET PROTECTION DURING AND AFTER EACH SIGNIFICANT STORM AND REMOVE SEDIMENT FROM BEHIND STRUCTURE AFTER EVERY STORM.

IF ROCK BECOMES CLOGGED WITH SEDIMENT, IT MUST BE CAREFULLY REMOVED FROM THE INLET AND EITHER CLEANED OR REPLACED.

10. USE MECHANICAL MEANS TO REMOVE SEDIMENT DEPOSITS (SHOVEL, BROOM, SWEEPER/VACTOR UNIT)

11. REMOVE SEDIMENT ACCUMULATED ON OR AROUND THE PROTECTION AS NEEDED TO MAINTAIN INTENDED FUNCTION.

12. REPAIR OR REPLACE MATERIALS AS NEEDED TO ENSURE PROPER FUNCTION.

Department of INLET PROTECTION TYPE GRAVEL AND WIRE MESH E-3 Public Works CLARK COUNTY WASHINGTON

STANDARD NOTES FOR EROSION CONTROL PLAN

- The Contractor shall install and maintain BMP's as shown and perform all actions necessary to prevent erosion, and control sediment from leaving the construction site. Site Contractor shall comply with Clark County Code Chapter 40.380.050.
- All erosion control measures shall be in-place and in working condition prior to disturbing and exposing any soil surfaces (i.e. silt fence, construction entrance, sedimentation barriers, sedimentation traps).
- 3. All erosion prevention and control BMP's shall be maintained and repaired as needed to insure continued performance of their intended function. Needed repairs shall be made as soon as practicable. They are to remain in place and operational during all phases of construction. Construction activities shall not continue or resume until repairs to erosion control facilities are made and the facilities are functional. Any sediment leaving the site or discharging to a sensitive area shall be stopped and controlled immediately. Contaminated areas shall be cleaned and restored.
- Clearing limits and work area limits shall be delineated and marked. Do not disturb more area than needed for construction requirements.
- 5. All sensitive or critical areas (wetlands, steep slopes, natural waterways), and buffers shall all be clearly delineated and clearly marked, and protected from sediment deposition 6. Sediment lader runoff shall be prevented from entering all existing storm water catch begins and inlate affected by construction.
- 7. No exposed, bare soils shall remain unstabilized for more than two days during the period October 1 thru April 30 or for more than seven days during the period of May 1 through September 30. All disturbed soil surfaces shall be stabilized by a suitable application of "Best Management Practices".
- 8. Where feasible, no more than 500 feet of trench shall be open at one time. Excavated material shall be placed on the up-hill side of trenches provided it does not conflict with safety requirements.
- 9. Dewatering devices shall discharge into a sediment trap or sediment pond. No discharge shall be made to a paved street or stormwater collection system without first removing sediment.
- 10. Cut and fill slopes shall be constructed in a manner that will minimize erosion. Erosion shall be controlled and prevented by such measures as roughening the surface, installation of interceptor ditches, terracing, covering with matting, mulch or plastic sheeting. Runoff shall be prevented from entering a slope and from undercutting the base of slopes
- 11. Any soil or debris transported onto roadways and sidewalks shall be removed. Deposits shall be completely removed by shoveling and/or sweeping. Washing shall not be utilized unless specifically approved in writing by the County.
- 12. All permanent infiltration systems shall be isolated and protected from sediment lader runoff entering to avoid risk of reducing the ability of the systems to infiltrate. Isolation and protection shall not be removed until the drainage area tributary to the system is completely stabilized.

	CONTINUE	D ON SHEET	2	NO.	REVISIONS	DATE	BY
				\vdash			+
1	Department of Public Works	STANDARD NOTES FOR EROSION CONTOL PLAN				NOARO CN1	
1	CLARK COUNTY	Pener Cape		ROVED	oilo1lo4		W No. ED SCH
"	proud pant, promining future	COUNTY ENGINEER			DATE	DATE C	8/02/02

STANDARD NOTES FOR EROSION CONTROL PLAN (CONTINUED)

- 13. All conveyance channels, both temporary and permanent shall be stabilized to prevent erosion of the channel. Stabilization shall extend to areas at outlets and downstream reaches vulnerable to erosion resulting from flow discharging from the channel.
- 14. If BMP's shown are utilized but are insufficient to prevent sediment from reaching water bodies, adjacent properties, or public rights—of—way; additional BMP's shall be implemented immediately to prevent further encroachment of sediment.
- 15. Stabilized areas shall be provided for employee parking and storage of construction materials. Erodeable stackpiles of earthen materials, such as topsoil, silty and alayey soils; and landscape materials, shall be covered when not being incorporated in the work. Erosion control BMP's shall be utilized as necessary to prevent sediment laden runoff from leaving or sediment being transported from these areas from vehicle activity.
- 17. The Contractor shall keep an inspection log of the condition of the erosion control facilities. Erosion control facilities shall be inspected at least weekly and after each rainfall. The inspection log shall be kept at the project site at a designated location and shall be available for review by the County. An individual that has successfully completed the County's Erosion Control Certification course shall perform inspections and maintain the log.
- 18. All temporary BMP's shall be removed within 30 days after final site stabilization is achieved. Trapped sediment shall be deposited and stabilized on site. Areas disturbed resulting from removal shall be permanently stabilized.
- 19. Construction shall not be considered complete and acceptable until all disturbed soil surfaces have been protected from erosion with permanent landscaping, covering with impervious surfaces, restored to original undisturbed condition or permanently stabilized.
- 21. During dry weather construction periods the contractor shall provide project—specific dust control measures that may include: Seeding, Mulching, Matting, Water, Tackifier, or Chemical Soil Stabilizers. The contractor shall maintain the dust control measures through dry weather periods until all disturbed areas have been stabilized. Immediately re-stabilize areas disturbed by contractor's operations or other activities (wind, water, vandalism, etc.).
- 23. Maintenance and repair of heavy equipment and vehicles which involve potential contaminants (oil,solvents,hydraulic fluid, etc.) must be conducted in a manner which prevents contamination of soils, surface water and ground water. Tarps, drip pans, or other appropriate measures shall be used as necessary.

24. Stripping, topsoil, and unsuitable material stockpiles shall be hydroseeded with "regreen wheat x wheat grass hybrid by Hobbs and Hobkins (or approved equal). Maintenance of stockpile areas and reapplication of hydroseed covering shall be required if bare soil is present. During winter and wet weather conditions, stockpiles shall be covered with plastic sheeting per detail E-16.



Department of Public Works CLARK COUNTY
WASHINGTON
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PRELIMINARY

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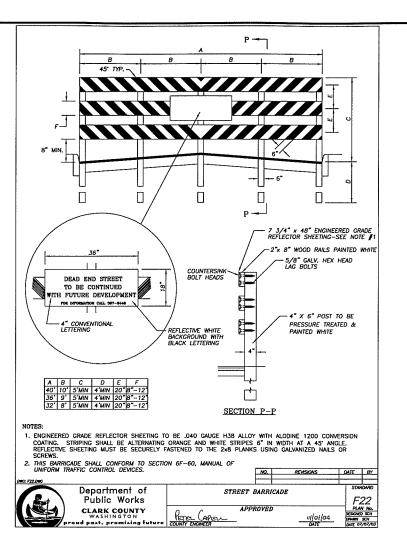
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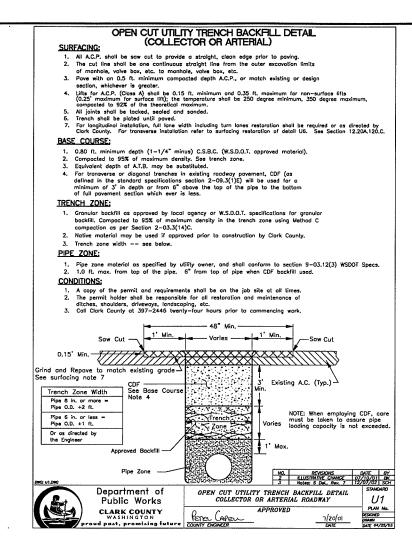
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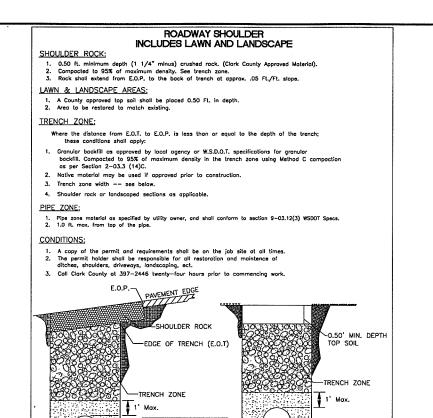
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CI







Trench Zone Width

Or as directed by the Engineer

Department of

Public Works

CLARK COUNTY



U5

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ROAD TAILS

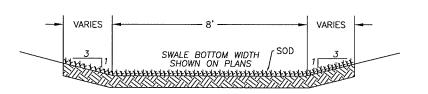
NE HEISSON ROADWAY DEI

PRELIMINARY

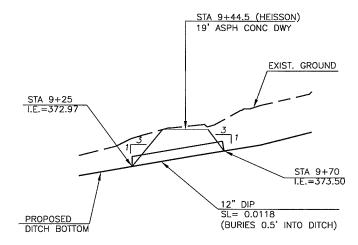
- 1. TOP SOIL TO BE TYPE A. (INCL. IN PAYMENT OF SWALE).
- 2. INSTALL SOD ON SWALE BOTTOM ALL DISTURBED AREAS. WITHIN THE SWALE.
- 3. SWALE VEGETATION TO BE WELL ESTABLISHED PRIOR TO PAVING.

4. SEED MIX FOR BIOFILTRATION SWALE

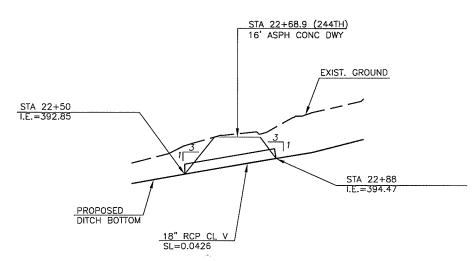
PERENNIAL RYEGRASS 20% KENTUCKY BLUEGRASS 30% TALL FESCUE, ALTA FESCUE 30% RED FESCUE



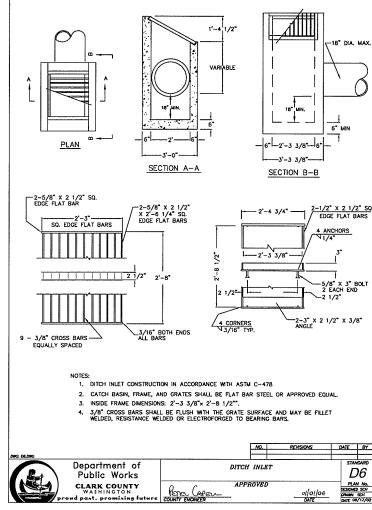
BIOFILTRATION SWALE NTS

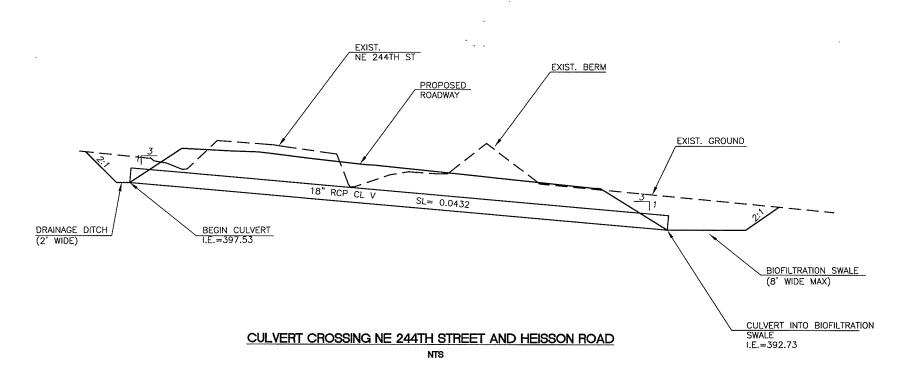


DRIVEWAY CULVERT WEST OF HEISSON ROAD NTS



DRIVEWAY CULVERT NE 244TH STREET

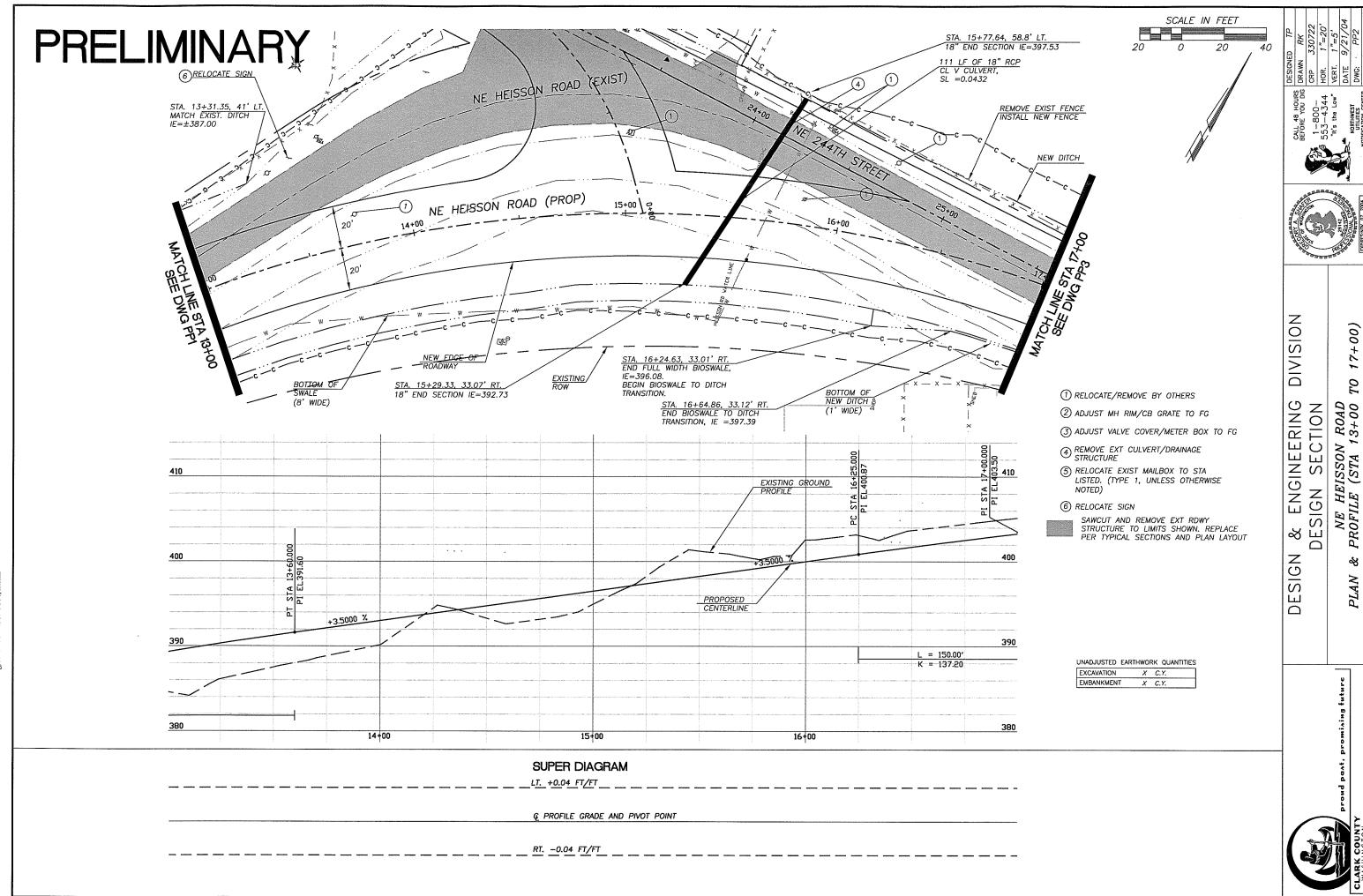




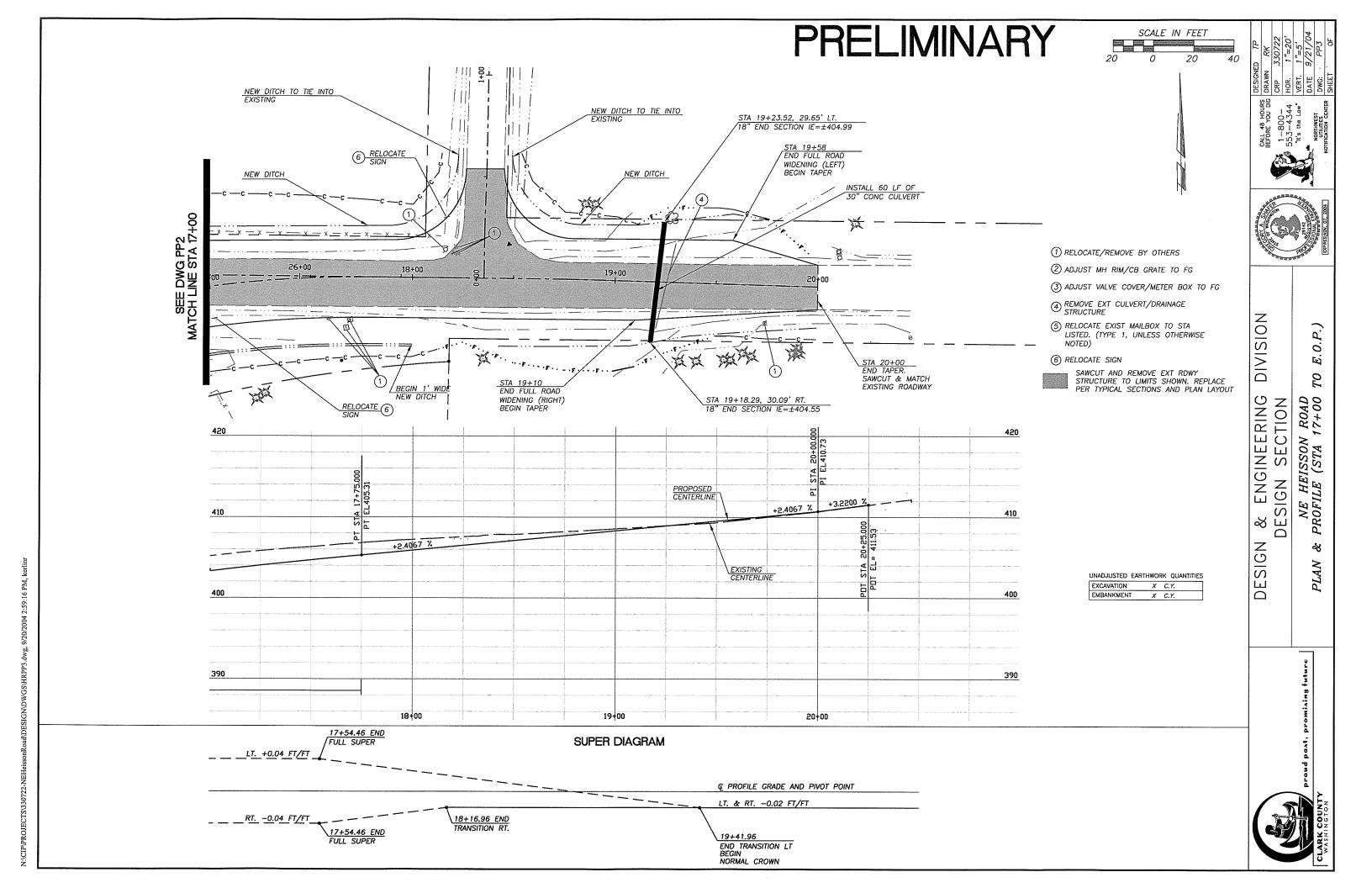


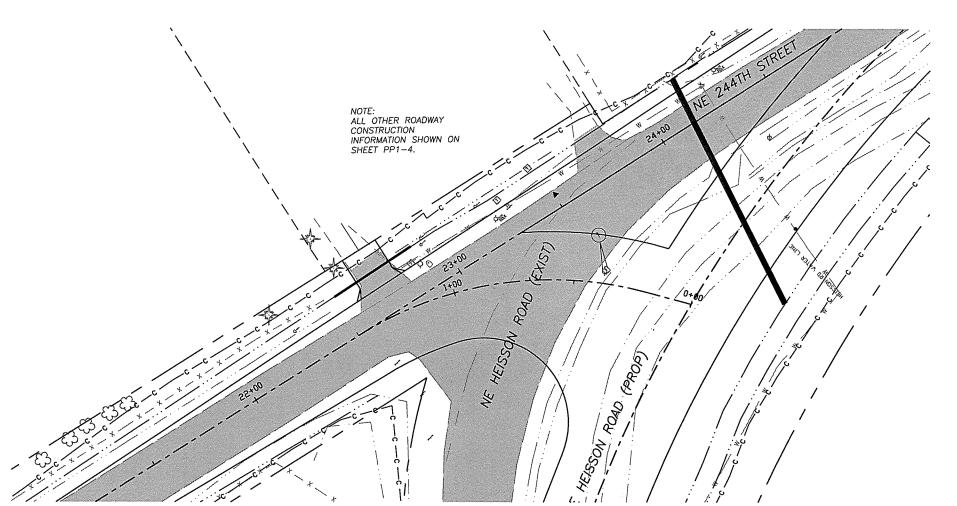


NACIPAR OTECTS/330722-NEHeisson Boad (DESIGNA) DWGS (HR PP) 1 dura 9/20/2004 3-10-00 PM Fort



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1 RELOCATE/REMOVE BY OTHERS

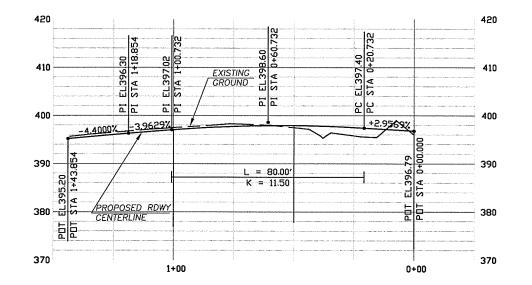
② ADJUST MH RIM/CB GRATE TO FG

(5) RELOCATE EXIST MAILBOX TO STA LISTED. (TYPE 1, UNLESS OTHERWISE NOTED)

3 ADJUST VALVE COVER/METER BOX TO FG 6 RELOCATE SIGN

REMOVE EXT CULVERT/DRAINAGE STRUCTURE

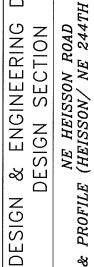
SAWCUT AND REMOVE EXT RDWY STRUCTURE TO LIMITS SHOWN. REPLACE PER TYPICAL SECTIONS AND PLAN LAYOUT



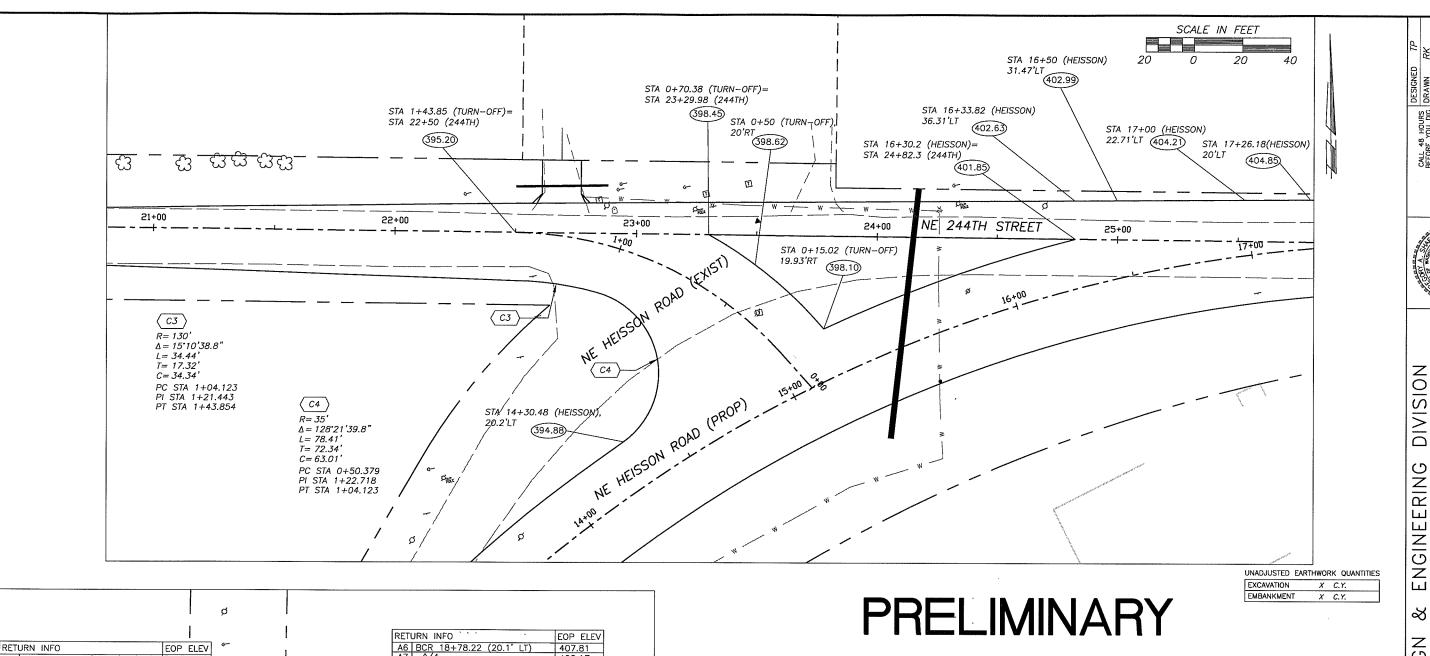
PRELIMINARY

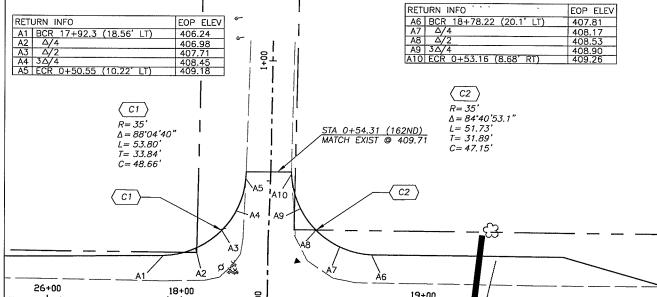
UNADJUSTED EARTHWORK QUANTITIES EXCAVATION X C.Y.

EMBANKMENT



DIVISION





STA 0+00 (162ND)= STA 18+35.34 (HEISSON)

SECTION NE HEISSON ROAD INTERSECTION PLAN ENGINEERING & ENG DESIGN DESIGN